



IMPACT WRENCH

18 VOLT - CORDLESS

Model 94855

OPERATING INSTRUCTIONS



Due to continuing improvement, actual product may differ slightly from product described herein.

3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our Web site at: <http://www.harborfreight.com>

Copyright© 2006 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.

For technical questions, please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Power Source	18 VDC Battery, 1.3 Ah. Battery Lock: Yes (Clips). Cell Type: Ni-Cad /1300 mAh. Cell Count: 15 Cells. Charge Time: 3-5 Hours. Plug Type: 2 Prong.
Charger Input	120 VAC / 60 Hz.
Charger Output	24 VDC / 400 mA. 9.6 Amp.
Tool Drive	1/2" w/ Spring Ball & Clip.
Maximum Torque	150 FT. Lbs.
Impact Speed	1900 BPM.
Socket Size	1/2" (Qty. 1) (not included)
Weight	5.35 Pounds.
Variable Speed	0- 2400 RPM

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY RULES

 **WARNING!**

READ AND UNDERSTAND ALL INSTRUCTIONS
Failure to follow all instructions listed below may result in
electric shock, fire, and/or serious injury.
SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks

which may ignite the dust or fumes.

3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

ELECTRICAL SAFETY

4. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
5. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
6. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
7. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
8. **Do not abuse the Power Cord. Never use the Power Cord to carry the tools or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.
9. **When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”.** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

PERSONAL SAFETY

10. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

11. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
12. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.
13. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
14. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.
15. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

16. **Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
17. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
18. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.
19. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
20. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
21. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with a sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.

22. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
23. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.


SERVICE

24. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
25. **When servicing a tool, use only identical replacement parts. Follow instructions in the “*Inspection, Maintenance, And Cleaning*” section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use the Impact Wrench in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.
2. **Maintain labels and nameplates on the Impact Wrench.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
3. **When using the Impact Wrench, always maintain a firm grip on the tool with both hands.**
4. **Do not use the Impact Wrench or Charger (48) if it has been dropped, damaged, left outdoors, or immersed in liquid.**
5. **Do not charge the Battery (30) when the temperature is below 50 degrees Fahrenheit or above 104 degrees Fahrenheit.**
6. **Do not shake, drop, or strike the Battery (30).**
7. **To avoid electrical shock, do not pull or carry the Charger (48) by its Power Cord or pull the Power Cord around sharp corners or edges.** Do not unplug the

Charger by pulling on the Power Cord. Keep the Power Cord away from heated surfaces.

8. **To avoid electrical shock, do not handle the Charger (48), its Power Cord Plug, or the Impact Wrench with wet hands.**
9. **Keep the Handle of the Impact Wrench dry, clean, free from oil and grease.**
10. **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the Impact Wrench.
11. **Never leave the Charger (48) unattended when it is plugged into an electrical outlet.** Make sure to unplug it from its electrical outlet before leaving.
12. **Always turn off the Impact Wrench and unplug the Charger (48) from its electrical outlet before changing accessories or performing any inspection, maintenance, or cleaning procedures.**
13. **Always switch to a fresh Battery (30) when tool performance begins to diminish.** Severe heat is most destructive to a Battery. The more heat generated, the faster the Battery loses power. A Battery that gets too hot can be permanently damaged. Never over-discharge a Battery by using the tool even after tool performance is decreasing. Never attempt to discharge a tool's Battery by continuing to pull the tool's trigger. When tool performance begins to diminish stop the tool, recharge the Battery, and use the fresh Battery for optimal performance.
14. **Battery (30) leakage may occur under extreme usage or temperature conditions.** If Battery fluid comes in contact with skin, wash with soap and water and rinse with lemon juice and vinegar. If the fluid comes into contact with the eyes, flush with water for several minutes and contact a doctor immediately.
15. **Never burn the Battery, as it can explode in a fire.** Do not charge the Impact Wrench if it has a leaking Battery. Contact local solid waste authorities for instructions on correct disposal or recycling of the Battery.
16.  **WARNING!** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

WARNING: This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code 25249.5, et seq.)

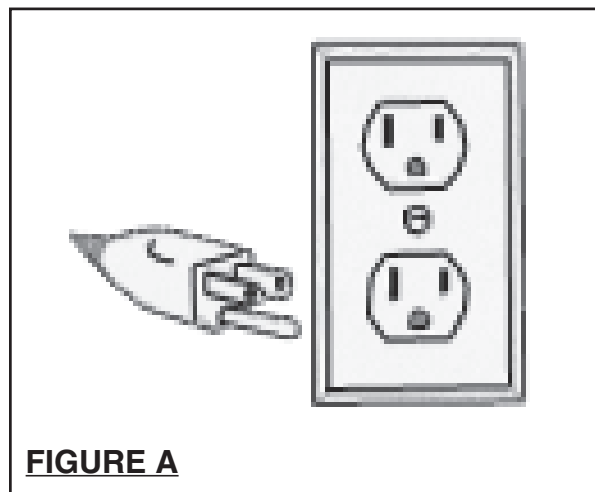
GROUNDING

WARNING!

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

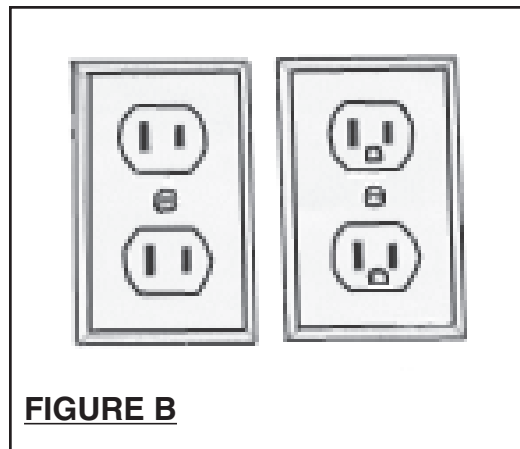
GROUNDING TOOLS: TOOLS WITH THREE PRONG PLUGS

1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See Figure A.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal. **(See Figure A.)**
3. Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration. **(See Figure A.)**



DOUBLE INSULATED TOOLS: TOOLS WITH TWO PRONG PLUGS

4. Tools marked “Double Insulated” do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. **(See Figure B.)**
5. Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration. **(See Figure B.)**



EXTENSION CORDS




1. **Grounded** tools require a three wire extension cord. **Double Insulated** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. **(See Figure C, next page.)**
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Figure C.)**
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. **(See Figure C.)**
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. **(See Figure C.)**

6. If you are using an extension cord outdoors, make sure it is marked with the suffix “W-A” (“W” in Canada) to indicate it is acceptable for outdoor use.
7. Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 VOLT)					
NAMEPLATE AMPERES (At Full Load)	EXTENSION CORD LENGTH				
	25 Feet	50 Feet	75 Feet	100 Feet	
- 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

FIGURE C * Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

SYMBOLOLOGY


	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
V ~	Volts Alternating Current
A	Amperes
n_oxxxx/min.	No Load Revolutions per Minute (RPM)

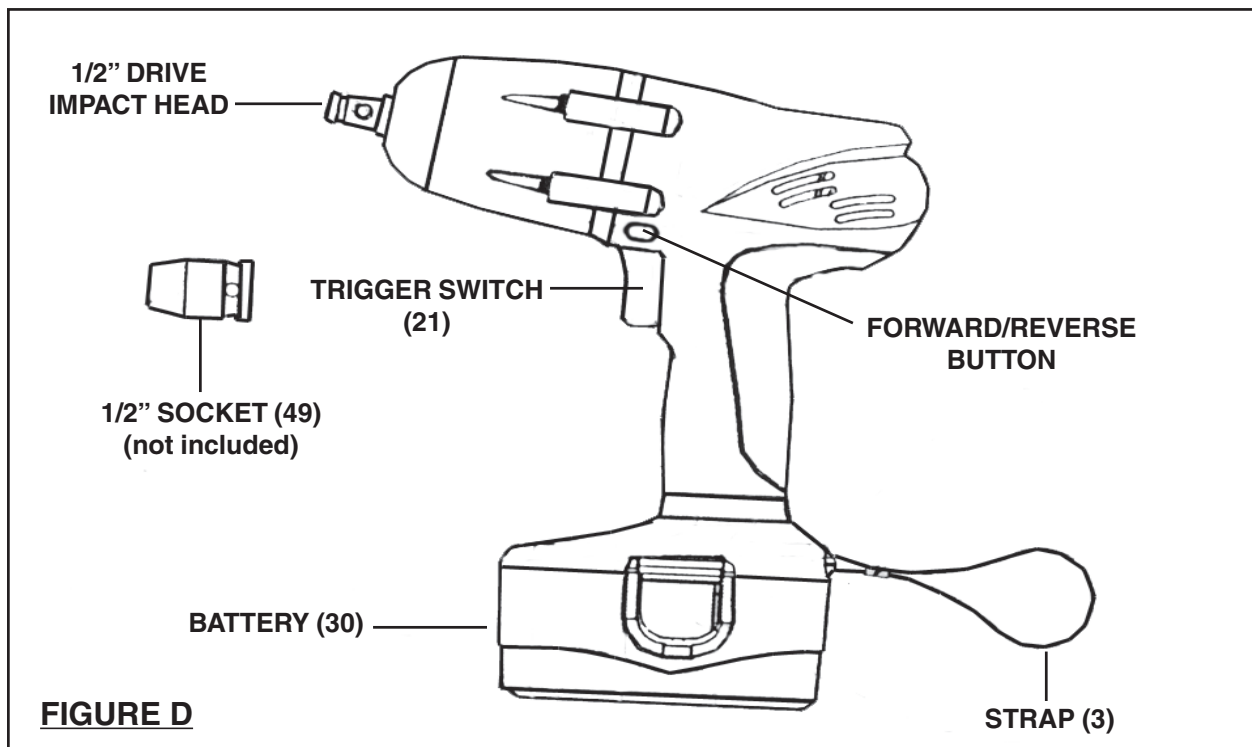
UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts List on page 14** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

PRODUCT FEATURES

NOTE: For additional information regarding the parts listed in the following pages, refer to the **Assembly Diagram on page 15**.

1.  **WARNING!** Always make sure the Trigger Switch (21) of the Impact Wrench is in its “OFF” position, the Battery (30) is removed from the Impact Wrench, and the Charger (48) is unplugged from its electrical outlet prior to making any adjustments to the tool. (See Figure D.)

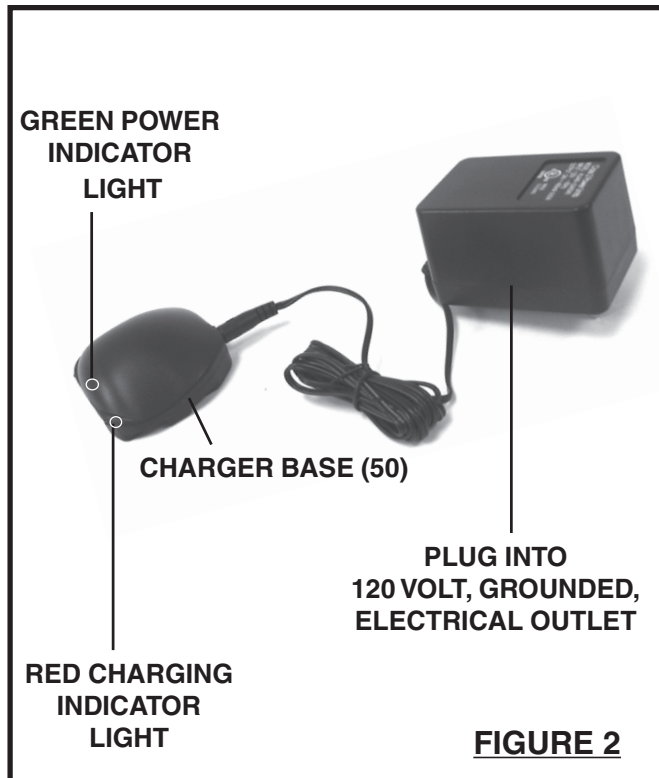
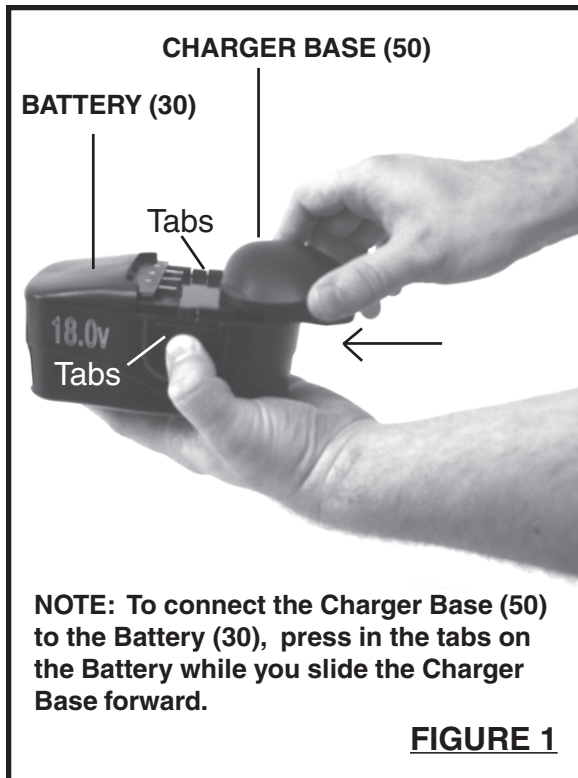


2. **Trigger Switch (21):** The Trigger Switch is operated *manually* simply by squeezing the Trigger Switch to turn on the Impact Wrench and releasing pressure on the Trigger Switch to turn off the Impact Wrench. (See Figure D.)

3. **Forward/Reverse Button:** The Forward/Reverse Button allows you to change the rotational direction of the Impact Wrench. For a clockwise rotation, move the Forward/Reverse Button to the *right*. For a counterclockwise rotation, move the Forward/Reverse Button to the *left*. To avoid damage to the Impact Wrench, always wait until the tool completely stops before changing rotational directions. **(See Figure D.)**
4. **1/2" Drive Impact Head:** The 1/2" Impact Head features a spring and ball clip to securely hold a socket. The Impact Head accepts all sizes of standard and metric sockets having a 1/2" drive.
5. **Battery (30):** The power source for the Impact Wrench is a re-chargeable, 18 VDC Battery. Make sure to follow all safety precautions when working with the Battery.

TO CHARGE THE IMPACT WRENCH


1. **NOTE:** The Battery (30) requires charging. The first charge requires **5 hours** charge time prior to using the Impact Wrench.
2. The Battery (30) should only be recharged when the Impact Wrench begins to run slowly.
3. When the Battery (30) requires recharging, a **3 to 5 hour** charge allows the tool to operate at full power. Do not recharge the Battery longer than 5 hours, as damage to the Battery and/or Impact Wrench will occur.
4. Remove the Battery (30) from the Impact Wrench. Slide the Charging Base (50) onto the top of the Battery (30) (see Figure 1, page 12) and plug the Charger (48) into the Charging Base (see Figure 2, page 12). Then plug the Charger (48) into the nearest 120 Volt, grounded electrical outlet.
5. The red light on the Charger Base (50) indicates that the Battery (30) is charging. It will stay lit while the Battery (30) is charging. The Charging Base automatically stop charging the Battery (30) when the battery gets too hot (over 113 degrees Fahrenheit). It will automaticity resume charging of the Battery (30) when the temperature falls below 113 degrees Fahrenheit.
6. The green light on the Charger Base (50) indicates that the Charging Base is getting power.
7. Once the Battery (30) is fully charged, disconnect the Charger (48) from the electrical outlet. Next disconnect the Charger Base (50) from the Battery (30). Press in the tabs on the Battery (30) while sliding out the Charger Base (50) (see Figure 1, on the next page).



OPERATING INSTRUCTIONS

1. Before installing the Socket (49), make sure the Battery (30) is removed from the Impact Wrench to avoid accidental starting. Then, firmly insert and lock in place the Socket onto the 1/2" Impact Head of the tool.
2. Whenever possible, secure the work piece in place, using a vise or clamps (not included).
3. Insert the fully charged Battery (30) into the Handle of the Impact Wrench, and rotate the Battery 180 degrees to lock the Battery in place.
4. Use the Forward/Reverse Button to select the turning rotation of the Impact Wrench.
5. Insert the Socket (49) onto the nut that is to be loosened/tightened. **NOTE:** If using the accessory 1/2" Socket, the nut itself must be 1/2".
6. Make sure to hold the Impact Wrench firmly with both hands, as torque from the Motor will cause the tool to twist. Then, squeeze the Trigger Switch (21) to turn on the Impact Wrench. The more you depress the Trigger Switch (21) the faster the Impact Wrench will turn.
7. When finished, release the Trigger Switch (21) to stop the Impact Wrench. Then, remove the Battery (30) and Socket (49) from the tool.

INSPECTION, MAINTENANCE, AND CLEANING

1.  **WARNING!** Always turn the Trigger Switch (21) to its “OFF” position, and unplug the Charger (48) from its electrical outlet before performing any inspection, maintenance, or cleaning.
2. **BEFORE EACH USE**, inspect the general condition of the Impact Wrench. Check for misalignment or binding of moving parts, cracked or broken parts, leaking Battery, damaged Charger wiring, chipped or broken sockets, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use.
Do not use damaged equipment.
3. **DAILY:** With a clean cloth, remove all dirt, grease, and oil from the Impact Wrench. Do not immerse the Impact Wrench in any liquids.

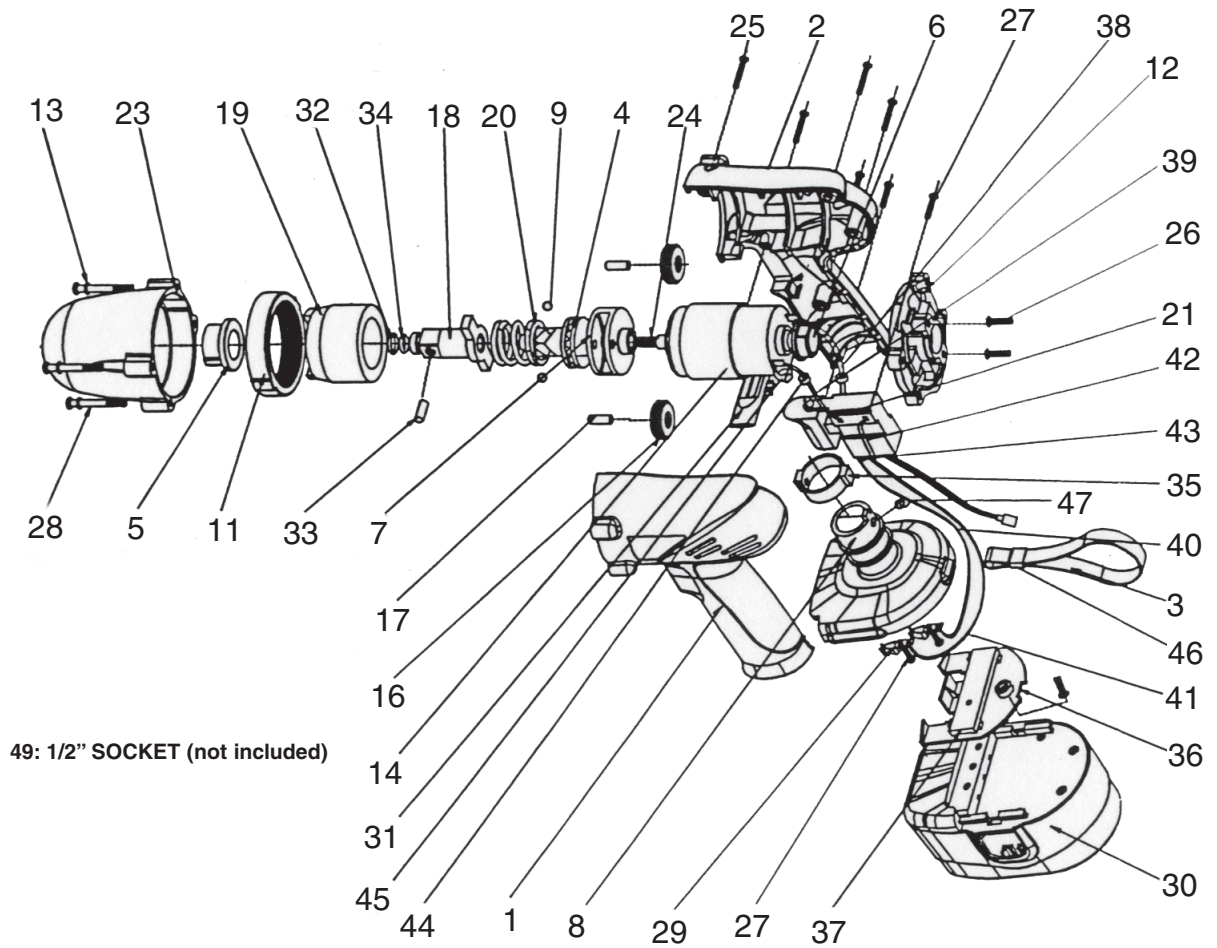
PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part #	Description	Qty.	Part #	Description	Qty.
1	Left Body	1	27	Bolt (M3 x 10)	5
2	Right Body	1	28	Bolt (M4 x 35)	4
3	Strap	1	29	Power Clip	2
4	Plane Bearing	1	30	Battery	1
5	Bushing (1)	1	31	Shift Block (1)	1
6	Bushing (2)	1	32	Spring	1
7	Center Shaft	1	33	Screw (M5)	1
8	Bottom Seat	1	34	O-Ring	1
9	Sphere (D5)	3	35	Orientation Housing	1
11	Inside Gear Loop	1	36	Bottom Plate	1
12	Motor Fix Case	1	37	Radiator	1
13	Washer (M4)	4	38	Lead Wire (Red +)	1
14	Motor	1	39	Lead Wire (Black -)	1
16	Planet Gear	2	40	Lead Wire (Red +)	1
17	Planet Shaft	2	41	Lead Wire (Black -)	1
18	Pound Block	1	42	Lead Wire (Yellow)	1
19	Revolve Block	1	43	Lead Wire (Blue)	1
20	Spring	1	44	Magnet Ring	2
21	Trigger Switch	1	45	Capacitor	2
23	Top Case	1	46	Strap Clamp	1
24	Motor Gear	1	47	Hex Screw	1
25	Bolt (M3 x 15)	5	48	Charger	1
26	Bolt (M4 x 15)	2	49	1/2" Socket (not included)	1
			50	Charger Base	1

ASSEMBLY DIAGRAM



NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.